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AUTHOR	Cooper, Pamela; Carpenter, Patricia J.
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ABSTRACT

Procedures utilized during the 1971-72 IMS (Instructional Management System) exercise to record and monitor the flow of data-gathering forms are described and explained. Mailing, logging, pre- and post-processing and filing operations are discussed. Operational problems are identified. Examples of forms are appended. (SK)

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TITLE: 1971-72 IMS COMSYS I AND II OPERATIONS GUIDE

AUTHORS: Pamela J. Cooper and Patricia J. Carpenter

ABSTRACT

This document describes procedures utilized during the 1971-72 IMS system exercise to record and monitor the flow of data gathering forms. Mailing, logging, pre- and post-processing and filing operations are discussed sequentially. Examples of forms are included.

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1971-72 IMS COMSYS I AND II OPERATIONS GUIDE

INTRODUCTION

Alternative methods were considered in establishing the procedures utilized during the 1971-72 IMS system exercise to record and monitor the flow of data gathering forms. The methods selected were required to be flexible enough both to meet the criteria set by IMS and the Computing Center and to be modified as the tryout evolved. Grobe's description (TN 5-72-03) of the proposed operating procedures for creating the data base, for input and output should be read to place this document in perspective. After the procedures were defined, proposed and approved, responsibility for the various tasks was assigned to two members of the Computing Center and IMS staffs, the Data Processing and IMS Clerk.

This operations guide describes their functions separately, although frequently their responsibilities overlapped or were exchanged. Section I describes the optimal conditions of IMS 1971-72 system exercise and each operational phase is discussed sequentially. The second section deals with the operational problems encountered during the tryout and lists possible preventative measures. Examples of the logging forms, sample pages from the clerk's notebooks and charts appear in the third section.

I. IMS FORMS HANDLING PROCEDURES

Training Materials

Materials were assembled by the IMS clerk prior to each training session and distributed to the teachers by IMS and DRS staff members. The teachers

were provided with portfolio folders to store their training materials. The following forms were included in the training packets:

FYCSP:

- Class Record Sheet
- Class Record Sheet Directions
- Criterion Exercise
- Criterion Exercise Directions
- Practice Criterion Exercise
- Practice Criterion Exercise Directions
- Criterion Exercise Cards
- ID Sheet
- ID Sheet Directions
- Pre-addressed mailing envelopes

LMS:

- Class Record Sheet
- Class Record Sheet Directions
- Criterion Exercise Sheet
- Criterion Exercise Sheet Directions
- Pupil List
- Pupil List Directions
- ID Sheet
- ID Sheet Directions
- Pre-addressed mailing envelopes

Questionnaires were given to each teacher attending the training session which provided information about grade level, program, class time, and current instructional unit. The IMS Clerk transferred that information from the questionnaire to the two copies (original and carbon) of the Class Record Sheet. Both copies were then mailed to the teacher and the carbon copy was returned to SWRL in the pre-addressed envelope provided. In most cases the Class Record Sheets were returned promptly and were completed correctly. The date the Class Record Sheet was received at SWRL was noted in the Forms Control Log (Figure 1).

Initial Mailing of IMS Forms

The next step involved mailing appropriate materials to each teacher. The teacher questionnaire enabled the IMS clerk to correctly assemble the materials listed below.

FYCSP

3 units (40 sheets each) Criterion Exercise Sheets

40 IMS Identification Sheets

10 pre-addressed mailing envelopes

LMS

3 units (10 sheets each) Criterion Exercise Sheets

6 Pupil Lists

40 IMS Identification Sheets

10 pre-addressed mailing envelopes

These materials were mailed directly to the teacher in 10" x 14" envelopes.

Prior to the introduction of the teacher questionnaire, the teachers relayed identifying information (i.e., program, unit number, class time) through their principal to SWRL. Based on that preliminary information the appropriate IMS materials were taken to the training sessions and given to the teachers at that time. In either case the date the materials were given to the teachers was noted in the Forms Control Log by the IMS clerk.

Return Envelopes

Pre-addressed envelopes for returning Criterion Exercise Sheets were mailed to the teachers in increments of 10 each.

Logging of IMS Forms

As the Class Record Sheets and Criterion Exercise Sheets were received they were logged-in by the IMS clerk. The Forms Control Log (Figure 1), organized by district, school and teacher, was used to record each completed unit by the date it was received. A second log (Figure 2) was kept on a keypunch form to record teacher, school, district, program, grade, unit number, and testing, mailing, and receipt dates. Problems with the data (erasures,

missing ID Sheet, etc.) were also noted on this log. A third log (Figure 3) was kept informally in notebook form by the IMS clerk to record teacher errors. Such problems as stapled criterion exercise sheets, incorrectly used IMS forms, or missing ID Sheets were listed by date.

Preprocessing of Raw Data by IMS Clerk

After the criterion exercise sheets were logged, the IMS clerk completed the initial preprocessing effort. The data were checked for teacher-generated errors such as incorrect use of IMS forms or incorrect procedures. As many corrections as possible were made by the IMS clerk who then contacted each teacher by telephone regarding errors made. For example, the IMS clerk reminded a teacher to include an Identification Sheet with the criterion exercise sheets. The clerk then supplied the missing Identification Sheet and completed the test date information.

Raw Data Sent to Data Processing Clerk for Preprocessing

The data were sent daily to the person responsible for preparing a scan tape. The Data Processing Clerk (DPC) continued preprocessing by checking the quality of the response cell marks and for holes in the test sheets. The data were thoroughly checked for stray marks, double marks and smudged erasures, which were erased and then whited-out with liquid paper, a process which took approximately one hour per IMS run. Pupil Codes on the FYCSP and HR-3 criterion exercise sheets were checked by the Data Processing Clerk and missing Pupil Codes were completed from Class Record Sheet information. Pupil Codes on Side One of the FYCSP Criterion Exercise were compared with those on Side Two for accuracy. The DPC also darkened those teacher or pupil marks which were too light to be read by the optical scanner.

Occasionally the DPC required information from a teacher, in which case the IMS clerk would contact the teacher and relay information to the DPC.

Optical Scanner Operation

With the raw data preprocessed, the DPL initialized the optical scanning operation (Cooper, TN 5-72-26). The tape number and the date of scanning were logged on the IMS Run Control Sheet-II (Figure 4). The DPC also kept an informal notebook (Figure 5) which described the preprocessing problems and scanner difficulties by run number and date.

Data Input Tape

The data input tape was made by the DPC from the scan tape by using the OpScan Program. The date and tape number were logged on the IMS Run Control Sheet-II Form (Figure 4). The data generated from the input tape was checked by the DPC to assure that all forms were scanned and all classes were included.

Reports

The data input tape was then processed through RJS to UCLA. The IMS reports were generated and printed at SWRL. The Data Processing Clerk checked the reports to assure that header information, dates, format, error messages and run messages were correct. If a processing error appeared in the reports, the DPC resubmitted the forms in the next run. The multiple copy reports were run through the decollator and detacher machines. The Data Processing Clerk wrote the run number on the IMS copy of each report and sent that copy to the IMS clerk for filing.

Mailing and Filing Reports

IMS reports were mailed to each teacher in care of her respective principal by either the DPC or IMS clerk. Each teacher received his first

report in a personalized grey binder. An IMS copy of each report and the original data were filed at SWRL behind the appropriate teacher, school and district. Each report mailed was noted by the DPC in the informal log book.

II. OPERATIONAL PROBLEMS

The procedures established prior to the start of the 1971-72 IMS system exercise proved to be flexible enough both to record and monitor the flow of data gathering forms and to handle problems encountered during the tryout. From the viewpoint of the IMS and Data Processing Clerks, these problems were not unsolvable or unexpected, only time-consuming. The majority of errors were "teacher-generated" and could have been prevented had the teachers involved in the tryout followed more carefully the instructions given to them during training sessions. The IMS Clerk functioned as a liaison between IMS and the teachers by reinforcing the training instructions through telephone contact with the teachers. The teachers were cooperative in most cases. The major teacher generated errors which slowed the pre-processing effort are listed below by form.

IMS Identification Sheet. The most prevalent error was not including an Identification Sheet with the Criterion Exercise Sheet. If the teachers did not write her return address on the outside envelope the material was difficult to identify. Teachers also used the ID sheet as an update form to add a pupil to the data base without also including an ID sheet as a cover sheet to indicate the test date. This problem decreased during the later months of the tryout but occured 35 times among the 76 participating teachers.

Other problems connected with the ID sheet included:

.one ID sheet per student accompanying criterion exercise sheets rather than one ID sheet per test batch.

. test date not indicated on the ID sheet or, if entered, improperly coded

."add" pupil box not darkened when used as an update form

Criterion Exercise Sheets.

FYCSP

. Pupil Codes not marked

. Students "coded" their own criterion exercise sheets

. "Delete" box not marked when a pupil was to be omitted from the class roster

. Double marks by the pupils. If neither was X-ed out or circled, the Data Processing Clerk had to determine which one was intended to be correct

. Holes in the sheets caused by erasures or pencil marks

. Marks made by the pupils close to the pre-coded unit field which caused the scanner to read a different unit number

. Smudged or messy marks close to the response cell which had to be erased and then covered with white liquid paper

LMS

. Pupil List not marked

. "Tested" or "Delete" box not marked

. One criterion exercise used per pupil rather than scoring 10 pupils per page

Class Record Sheet

. Original rather than carbon copy mailed to SWRL

. lines skipped to indicate grouping which changed the sequence of the pupil numbers

Miscellaneous

. IMS forms stapled together, which produced a scannable hole

. messages from the teacher to the IMS clerk written on scannable portions of the sheets

FIGURE 1

FYCSP HR-1 HR-2 MBS-1

DISTRICT- SCHOOL- TEACHER-

CLASS- A.M. P.M. ROSTER MAILED ROSTER RECEIVED

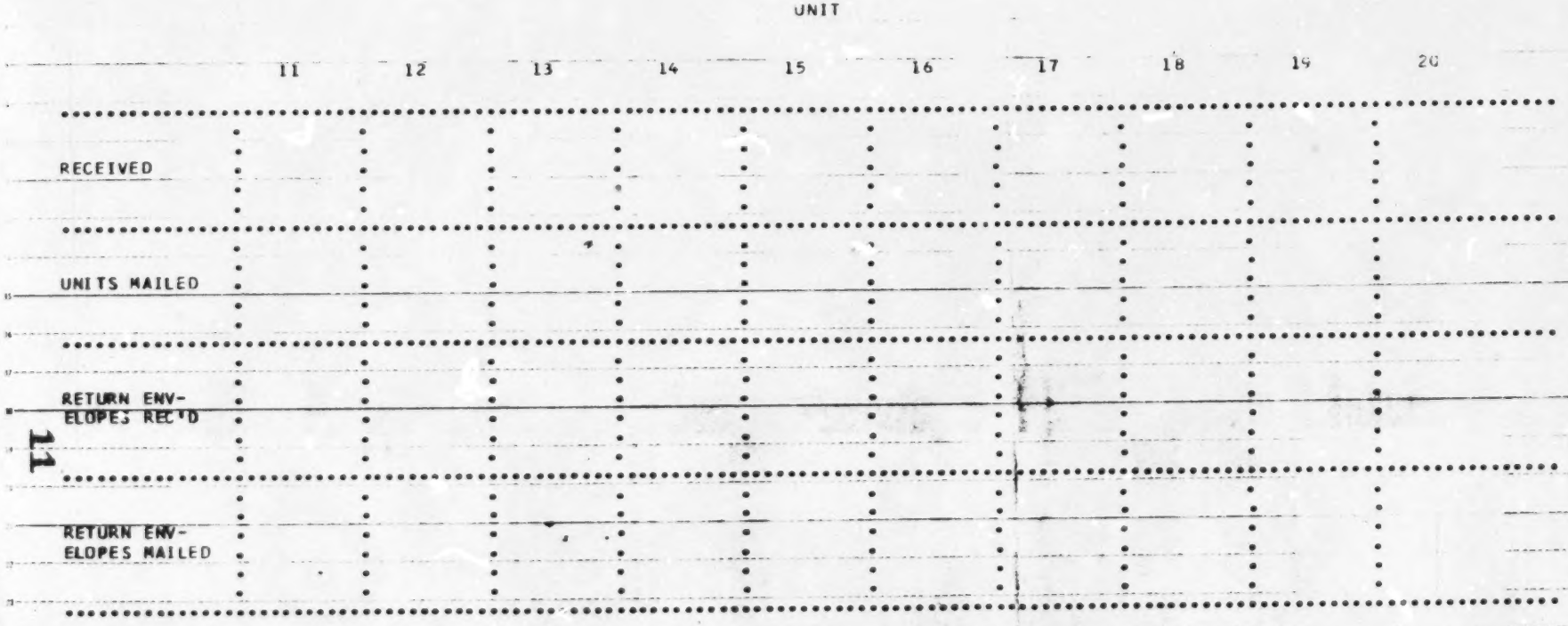

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FIGURE 2

RUN TYPE (1)

RUN NUMBER (2 3 4)

IMS RUN CONTROL SHEET - I

ATTACHMENT 1

CARD NO.	COMSYS	CLASS ID						UNIT NO.	TEST DATE T1			TIME DATA LEAVES SITE T2 / T3				TIME DATA ARRIVES FCS T4 / T5				DT1 = T2-T1	DT2 = T4-T2	DT3 = T5 - T3	DATE EST.	STATUS	COMMENTS:
		DIST	SCHL	TEA	PROG	GRDE	CLSS		MO	DA	YR	MO	DA	HR	MIN	MO	DA	HR	MIN						
5 6	7	8 9	10 11	12 13	14 15	16 17	18 19	20 21	22 23	24 25	26 27									28 29	30 31	32 33 34	35 36	37 38	

FIGURE 3

DATE	TEACHER	PROBLEM
2/25	Davids	one Criterion Exercise sheet not coded
	Phillip	mailed practice criterion exercise sheets
	Baker	" " " "
2/28	Martinez	no ID sheet; Pupil codes not coded
	Washington	Pupil ID's not coded on second page
	North	" " "
	Abrams	" " "
2/29	Parker	Test date not indicated
3/1	Martinez	One ID sheet per pupil; pupil ID's not coded
	Woods	no ID Sheet
	Claremont	One ID sheet per pupil; skipped lines on Class Record Sheet
3/2	Stokely	no ID sheet
	Williamson	Returned both copies of Class Record Sheet
3/3	Abrams	Pupil ID's not coded on second page; date coded incorrectly
	Baker	no ID sheet; Pupil codes not coded
3/6	Tate	Wrote on scan field of FYCSP Criterion Exercise sheet to score each test
	Washington	no ID sheet; used ink to code test date
	Bernstein	One ID sheet per pupil
3/9	Allen	Drew line thru response box to delete kids on Criterion Exercise sheet
	Vesey	Used Unit 5 instead of Unit 2 Criterion Exercise sheets

IMS RUN TYPE [ ] (1) NUMBER [ ][ ][ ] (2-4)

Figure 4

IMS RUN CONTROL SHEET - II

Scanner Station

Operator Name _____ Number of Scan Reruns [ ] (7)

Date ____/____ (Mo. / Day) Source Scan Tape No. ____

	1st Run	2nd Run	AVERAGE
Scanner Time On (T6)	____:____	____:____	
Off (T7)	____:____	____:____	
Operating Time (T7-T6)	____:____ Hrs. Min.	____:____ Hrs. Min.	____:____ Hrs. Min.

Comments: _____

_____

_____

690 Station

Scan Tape Processor _____ Number of Processing Reruns [ ] (8)

Date ____/____ (Mo. / Day) Scores Data Input Tape No. _____

Pupil Data Base Tape No. IMS DB _____

RJS Operator _____ Number of Transmission Failures [ ][ ] (9-10)

Date ____/____ (Mo. / Day)

Time Line Up (T8) ____:____ Report Output Tape No. _____

Report Output Tape EOF Time (T9) ____:____ Hrs. Min.

Comments: _____

_____

_____

FIGURE 5

Run 10

pre-processing

Woods - marked the new pupil box on cover sheet, but did not add pupil, erased the mark

Vesey - she wrote the 24th on the cover sheet, but coded it as the 26th - corrected

made the scan tape 2/2/72 - in making it I noticed the scanner missed a page; re-scanned 2/3/72

ran the Opsn program and made the data input tape 2/8/72; checked the printout and everything looks good

submitted to RJS 2/8/72 - printout came back 2/8/72 and everything looked good; reports checked out and messages are OK. The clerk is giving Wood a call to remind her she doesn't need to mark the delete box after deleting the student the first time - just leave it blank

reports were printed on report paper, prepared for mailing and mailed 2/9/72

Run 14

pre-processing

Mason - marked 2 different ID #'s for 1 student; it was looked up on the class roster and corrected
- also, 2 students marked 2 answers and crossed out 1, they did not erase

made the scan tape 2/14/72

made the data input tape 2/14/72 - printout of the data input tape looked good

submitted to RJS 2/17/72 - came back 2/17/72; losted the reports and checked them over, looked good

processed, prepared, and mailed reports 2/18/72

FIGURE 6

SWRL

FLOWCHART LAYOUT FORM

PROGRAMMER: _____ DATE: _____

PROGRAM ID: _____ PAGE ___ OF ___